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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,083	06/28/2001	Petruzzello John	US 010320	5332

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EXAMINER

SEFER, AHMED N

ART UNIT PAPER NUMBER

2826

DATE MAILED: 11/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/894,083

Applicant(s)

JOHN ET AL.

Examiner

A. Sefer

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 8, 9, 15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15 and 16 is/are allowed.
- 6) ☒ Claim(s) 1, 8 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/14/2003 has been entered and claims 6, 7 and 19-21 have been cancelled.

Claim Objections

2. Claim 1 is objected to because of the following informalities: The limitation "where the breakdown voltage differential ..." should read "where the breakdown voltage difference ...". Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagawa (JP 2000-114266) in view of Han et al. US Patent No. 5,907,181.

Yanagawa discloses in figs. 1 and 2 a hybrid semiconductor device, comprising a first portion (fig. 1b) being relatively resistant to breakdown voltage; the first portion comprising a MOS transistor or NMOS (as in claim 9); and a second portion (fig. 1a) being less resistant to

breakdown voltage and able to survive breakdown without device failure, the second portion residing adjacent the first portion and comprising a diode, wherein the diode has an identical structure as MOS transistor, except for a source region; where breakdown occurs at a higher voltage in the first portion, and at a lower voltage in the second portion, but does not specifically teach a breakdown voltage due to a difference in field plate length.

Han et al disclose in figs. 1 and 6 a conductor M3/M'3 extended over a dielectric layer 2 forming a field plate with different lengths thereby affecting the breakdown voltage.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the teachings of Han et al with Yanagawa's device, since varying the length of the field plate would achieve a desired breakdown voltage.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagawa in view of Han et al. as applied to claim 1 above, and further in view of Letavice et al. US Patent No. 5,969,387.

The combined references disclose the device structure as recited in the claim including an SOI structure, but do not specifically disclose an LDMOS.

Letavice et al disclose (see figs. 1-3 and abstract) a SOI-LDMOS that includes a MOSFET provided in a thin semiconductor film on a thin buried oxide.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the teachings of Letavice et al with the device of the combined references, since that would enhance the high-voltage and high-current performance parameters of the SOI power device.

Allowable Subject Matter

6. Claims 15 and 16 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter:

The record of references do not teach or fairly suggest the claimed device structure as recited in claim 15.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Sefer whose telephone number is (703) 605-1227.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (703) 308-6601.

ANS
November 8, 2003

A handwritten signature in black ink, appearing to be 'A. Sefer', is written over a faint circular stamp.